

REMARKS

Claims 1, 3-4, 6-12, 14 and 16-21 are pending in this application. By this Amendment, Claims 2, 5, 13 and 15 are cancelled without prejudice or disclaimer, and Claims 1, 7 and 12 are amended. As support for the amendments is provided in the originally filed application, the Applicant respectfully submits that no new matter is presented herein.

Entry of Response Proper

Entry of this Amendment is proper under 37 C.F.R. §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issues requiring further search and/or consideration on the part of the Examiner as the Amendment merely incorporates into Claims 1 and 12 the previously considered subject matter that was recited in now cancelled Claims 2 and 13; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The Amendment is necessary and was not earlier presented because it is made in response to objections raised in the Final Rejection. Entry of the Amendment is thus respectfully requested.

Claim Rejection -- 35 U.S.C. §103

Claims 1-11 and 16-18 are rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,538,649 to Demendi et al. (Demendi) in view of U.S. Patent No. 6,350,520 to Nesbitt et al. (Nesbitt). Claims 12-15 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,990,222 to Watada et al. (Watada) in view of Nesbitt.

Applicant respectfully traverses the rejections for the following reason(s).

Claim 1 recites a sliding element for seals comprising a fired preformed material including 25 to 75 weight % carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon and 20 to 50 weight % synthetic resin as a binder, wherein carbonaceous carbon fibers free of surface treatment are blended within the range of 5 to 25 weight % and inside a carbon matrix. The carbon fibers are randomly scattered, and are 5 to 30 µm in diameter and 50 to 300 µm in length.

Claim 12 also recites the features of the carbon fibers being free of surface treatment and the same ranges. Therefore, the following discussion regarding claim 1 is equally applicable to Claim 12.

As best understood by Applicant, the Office Action appears to be asserting the position that Demendi teaches the claimed article having the compounds with the specific weight percentage and binder material. However, the Office Action also appears to be admitting that Demendi, as well as Watada, fails to teach or suggest carbon material including "untreated" surface portions.

To cure the admitted deficiency of Demendi and Watada, the Office Action looks to Nesbitt for curing the deficiency. In particular, the Office Action asserts Nesbitt teaches it is known in the art to facilitate such carbon material, as taught by Demendi, to include such untreated material.

The Office Action then concludes by arguing it would have been obvious to combine the teachings of Nesbitt and include such untreated carbon material in Demendi and Watada. The supposed motivation for it being obvious to combine the teachings of Demendi/Watada and Nesbitt, while unclear in the Office Action, appears to be that doing so would impart desired article characteristics.

While Applicant is uncertain as to what the Office Action intended to mean by the rather vague and incoherent reasoning provided for the supposed motivation to make the asserted combination of Demendi/Watada and Nesbitt, the Applicant respectfully disagrees with the Office Action for the following reason(s).

As noted above, the Office Action insists that Demendi/Watada fails to teach or suggest carbon material including “untreated” surface portions, but that Nesbitt teaches it is known in the art to “facilitate” such carbon material. While Applicant is uncertain as to what is meant by “facilitating” carbon material, Applicant provides the following comments.

Applicant respectfully submits that Nesbitt does not teach or suggest the features (and/or the benefits flowing therefrom) of the carbon fibers having surfaces that are free from treatment as is recited in Claim 1.

Claim 1 recites the carbon fibers are free of surface treatment, a feature the Office Action admits is not taught or suggested by Demendi or Watada.

Col. 2, lines 57-65 of Nesbitt does not teach such a feature, rather, the cited passage describes preforming resins to a certain shape and subjecting same to high temperatures for extended periods of time to attain desired carbonization. The cited passage does not remotely teach or suggest carbon fibers being free of surface treatment, but instead discusses how damaging such a technique can be to the environment.

Col. 4, lines 10-25 of Nesbitt does not teach such a feature either, rather, the cited passage describes how expensive the use of amorphous carbon can be in certain industries. Again, the cited passage does not remotely teach or suggest carbon fibers being free of surface treatment.

Col. 5, lines 25-29 of Nesbitt does not teach or suggest such a feature either, rather, the cited passage merely describes providing a material made of amorphous carbon consolidated under elevated temperature and pressure. Again, the cited passage does not remotely teach or suggest carbon fibers being free of surface treatment.

Col. 7, lines 26-45 of Nesbitt does not teach or suggest such a feature either, rather, the cited passage merely describes the form of the amorphous carbon that is used being powder activated carbon. Again, the cited passage does not remotely teach or suggest carbon fibers being free of surface treatment.

Finally, col. 4, line 60 to col. 5, line 10 of Nesbitt, like the above discussed and all remaining written and illustrated features of that which is taught by Nesbitt fails to teach or suggest such a feature.

In view of the above, Applicant respectfully requests that any future communication from the Patent Office which chooses to maintain and assert the position Nesbitt teaches carbon fibers free of surface treatment, such a communication should quote the actual language in Nesbitt that supposedly stands for the proposition of “untreated” surface portions of carbon fibers instead of processing techniques, which is all that is taught by the passages cited by the instant Office Action.

In addition to the above, Applicant notes that Claim 1 recites carbon fibers having a diameter in a range of 5 to 30 μm and a length in a range of 50 to 300 μm . Applicant respectfully submits that when the diameter of the carbon fibers is smaller than the recited range, the carbon fibers become susceptible to breaking during the kneading or molding process and the internal reinforcement of the carbon matrix is weakened. Furthermore, when the diameter of the carbon fibers is greater than the recited range, a sliding torque effect increases along with heat generation, which causes structural damage on the sliding faces of the carbon fibers, thereby leading to the sealed fluid leaking. See paragraph [0015] of the application for further problems that may arise when the carbon fibers do not contain the recited properties.

To establish *prima facie* obviousness, each and every feature of a rejected claim must be taught or suggested by the art of record. See M.P.E.P. §2143.03. As discussed above, Demendi, Watada and Nesbitt, alone or in any combination thereof,

fail to teach or suggest each and every feature recited by Claims 1 and 12. Therefore, Claims 1 and 12 are not rendered obvious by Demendi, Watada and Nesbitt, alone or any combination thereof. As such, Claims 1 and 12 should be deemed allowable.

Claims 3-4, 6-11, 16-18 depend from Claim 1. Claims 14 and 19-21 depend from Claim 12. It is respectfully submitted that these dependent claims be deemed allowable at least for the same reasons Claims 1 and 12 are allowable, as well as for the additional subject matter recited therein.

Applicant respectfully requests withdrawal of the rejections.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1, 3-4, 6-12, 14 and 16-21, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 108179-00036.**

Respectfully submitted,
ARENT FOX PLLC

A handwritten signature in black ink, appearing to read 'MOZgu', is written over the printed name.

Murat Ozgu
Attorney for Applicant
Registration No. 44,275

Customer No. 004372

1050 Connecticut Avenue, NW, Suite 400
Washington, DC 20036-5339
Telephone: (202) 857-6000

MO/elp